

| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit) | | | | | | February 2002 | | | | |
|---|--|-------------------|--|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|------------|
| BUDGET ACTIVITY 4 - Demonstration/validation | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | | | |
| COST (In Thousands) | | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
| Total Program Element (PE) Cost | | 46238 | 52074 | 11354 | 7618 | 2148 | 142796 | 148322 | Continuing | Continuing |
| 643 | 120MM CONVENTIONAL TANK AMMUNITION | 27011 | 29737 | 5368 | 1651 | 2148 | 31864 | 32776 | Continuing | Continuing |
| 64A | TRAJECTORY CORRECTABLE MUNITION | 2884 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2884 |
| 64B | 105MM CONVENTIONAL TANK AMMUNITION | 0 | 22337 | 2993 | 3978 | 0 | 0 | 0 | 0 | 29308 |
| 656 | MULTI ROLE ARMAMENT AND AMMUNITION SYSTEM (MRAAS) | 16343 | 0 | 0 | 0 | 0 | 110932 | 115546 | Continuing | Continuing |
| 694 | MEDIUM CALIBER AMMUNITION | 0 | 0 | 2993 | 1989 | 0 | 0 | 0 | 0 | 4982 |
| <p><u>A. Mission Description and Budget Item Justification:</u>The Tank and Medium-Caliber Ammunition (TMA) Program Element (PE) encompasses a comprehensive program to develop, rapidly transition to production, and field, advanced tank, medium caliber and other munitions. These programs will ensure continued battlefield overmatch and lethality of U.S. maneuver forces despite worldwide development and proliferation of enhanced armored vehicle protection technologies. To do this, TMA will identify promising technology efforts and use competitive development along with streamlined acquisition procedures. All ammunition development funds within this PE are managed to facilitate transitions between phases, avoid administrative delays, and to focus resources on the most promising areas.</p> <p>The current cartridge development areas are in Kinetic Energy (120mm, M829E3), Training Ammunition (120mm, XM1002 and 25mm, M910E1), Anti-Personnel (105mm, XM1040 and 120mm, XM1028) and Smart Extended Range Munitions (105mm MRM), in support of weapon platforms. MRM, the Mid Range Munition, will provide greater hit probability at extended ranges, both line-of-sight and beyond-line-of-sight, increased survivability and lethality for the Mobile Gun System and Future Combat System, and will expand the Maneuver Task Force Commander's battle space.</p> <p>To date, five rounds of tank ammunition (M829A1, M829A2, M830A1, M865, and M831) have completed development under this program and entered/completed production.</p> <p>This PE supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).</p> | | | | | | | | | | |

ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2 Exhibit)**February 2002**

BUDGET ACTIVITY

4 - Demonstration/validation

PE NUMBER AND TITLE

0603639A - Tank and Medium Caliber Ammunition**B. Program Change Summary**

| | FY 2001 | FY 2002 | FY 2003 |
|--|---------|---------|---------|
| Previous President's Budget (FY2002 PB) | 49635 | 32986 | 30234 |
| Appropriated Value | 50139 | 52500 | 0 |
| Adjustments to Appropriated Value | | 0 | 0 |
| a. Congressional General Reductions | | -426 | 0 |
| b. SBIR / STTR | -1442 | 0 | 0 |
| c. Omnibus or Other Above Threshold Reductions | | 0 | 0 |
| d. Below Threshold Reprogramming | -1999 | 0 | 0 |
| e. Rescissions | -460 | 0 | 0 |
| Adjustments to Budget Years Since FY2002PB | | 0 | -18880 |
| Current Budget Submit (FY 2003 PB) | 46238 | 52074 | 11354 |

Funding: FY2001 - Funds (\$1999) reprogrammed for higher priority programs.

Funding: FY2002 - Includes Congressional plus-ups MRM KE, MRM TM3, and GPS-ISU.

Funding: FY2003 - Decrease represents the elimination of funding for the Tank Extended Range Munitions (TERM)

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| BUDGET ACTIVITY 4 - Demonstration/validation | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | PROJECT 643 | | | | |
| COST (In Thousands) | | | | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
| 643 | 120MM CONVENTIONAL TANK AMMUNITION | | | 27011 | 29737 | 5368 | 1651 | 2148 | 31864 | 32776 | Continuing | Continuing |
| <p><u>A. Mission Description and Budget Item Justification:</u> This project develops ammunition for the Legacy tank force and the Future Combat System (FCS).</p> <p>FY 2003 funding continues development of the 120mm XM1002 High-Explosive Anti-Tank, Multi-Purpose w/Tracer (HEAT-MP-T) training cartridge. This cartridge will be a ballistically similar, complementary training cartridge to the currently fielded M830A1 HEAT-MP-T service cartridge and will provide realistic training for Abrams tank crews. Tank training cartridges are required due to installation firing range restrictions on many types of service ammunition.</p> <p>This program initiates development of the 120mm XM1028 anti-personnel canister cartridge. This cartridge meets an urgent requirement from the Commander-in-Chief, United States Forces Korea (USFK), to effectively provide rapid, lethal fire against massed assaulting infantry armed with hand-held anti-tank and automatic weapons at close range (500 meters or less). Upon muzzle exit, 900-1000 tungsten balls are expelled, similar in concept to a shotgun shell. Unlike previous anti-personnel tank cartridges, the XM1028 has no fuze and is intended to be a simple, low-cost, low-technology cartridge.</p> <p>This project develops the necessary changes to platform weapons and fire control systems brought about by ever more capable ammunition. Additionally, this project will leverage ongoing and projected International Cooperative developments such as Future Tank Main Armament (FTMA) and many other program arrangements and agreements.</p> <p>This project supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).</p> | | | | | | | | | | | | |

| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) | | February 2002 |
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| BUDGET ACTIVITY 4 - Demonstration/validation | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | PROJECT 643 |
| <p><u>FY 2001 Accomplishments:</u></p> <ul style="list-style-type: none"> 4800 Finalized M829E3 Cartridge Configuration 9623 Procured 1163 M829E3s for Production Qualification Test (PQT) and provide government engineering support 4205 Initiated testing of PQT hardware for M829E3 4285 Finalized Producibility Improvements for M829E3 900 Completed risk reduction alternative propellant for M829E3 3198 XM1002 TP-T Cartridge projectile design, propellant and tracer development, and producibility completion <p>Total 27011</p> <p><u>FY 2002 Planned Program</u></p> <ul style="list-style-type: none"> 15000 Complete M829E3 Cartridge Development and Full Rate Production decision. 3000 Live Fire Testing M829E3 Cartridge 900 Vehicle Integration M829E3 2100 PQT Testing for M829E3 1337 Initial Operational Test and Evaluation for M829E3 5400 XM1002 TP-T Cartridge Engineering and Manufacturing Development (EMD) Phase 2, EMD contract award, conduct firing table tests, procure propulsion PQT components. 2000 Initial Cartridge/System Investigation (MRM). <p>Total 29737</p> <p><u>FY 2003 Planned Program</u></p> <ul style="list-style-type: none"> 1368 Fabricate PQT Prototypes for XM1002. 4000 Award Systems Development and Demonstration contract (XM1028) <p>Total 5368</p> | | |

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| BUDGET ACTIVITY 4 - Demonstration/validation | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | PROJECT 643 | |
| | | | | | | | | | |
| <u>B. Other Program Funding Summary</u> | <u>FY 2001</u> | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>To Compl</u> | <u>Total Cost</u> |
| E73300-M831/M831A1 120mm Heat Tank Trainer | 43738 | 45879 | 51471 | 43935 | 43022 | 40322 | 44642 | Continuing | Continuing |
| E73400-M865 120mm KE Tank Trainer | 105201 | 96809 | 103492 | 86266 | 86662 | 84000 | 95000 | Continuing | Continuing |
| E78013-M829E3 120mm Tank KE | 0 | 35348 | 40254 | 37717 | 43399 | 51644 | 52425 | Continuing | Continuing |
| E78011 M1028 120mm Canister | 0 | 0 | 3000 | 10000 | 7500 | 0 | 0 | 0 | 20500 |
| <p><u>C. Acquisition Strategy:</u> FY 2003 funds support the continuing development of the XM1002 HEAT-MP-T training cartridge. This project will use a streamlined acquisition strategy, keeping costs low while meeting scheduled requirements. Integrated Product Teams (IPTs) are being used. The XM1002 will replace the current M831A1 training cartridge.</p> <p>The acquisition strategy for the 120mm XM1028 anti-personnel canister cartridge has been approved. FY 2003 will initiate a two-year development effort for the XM1028. The contract award will be competitive and developed using performance specifications, leveraging canister cartridge work the government has accomplished to date.</p> <p>Prior year funds (FY 2002 and earlier) funded development of the M829E3 APFSDS-T and MRM along with the XM1002. Operational Requirements Documents (ORDs) have been approved for the XM1028, XM1002, and M829E3.</p> | | | | | | | | | |
| <u>D. Schedule Profile</u> | <u>FY 2001</u> | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | | |
| M829E3 APFSDS-T CARTRIDGE | | | | | | | | | |
| Optimize Cartridge Integration | 1Q | | | | | | | | |
| Test Penetrator vs. Target Suite | 1Q | | | | | | | | |
| Design Freeze | 2Q | | | | | | | | |
| Build Production Qualification Hardware | 1-4Q | | | | | | | | |
| Begin Production Qualification Test (PQT) | 3Q | | | | | | | | |
| Low Rate Production Decision | | 1Q | | | | | | | |
| Complete PQT | | 3Q | | | | | | | |
| Live Fire Test | | 1-4Q | | | | | | | |
| Conduct Initial Operational Test and Evaluation (IOT&E) | | 2-4Q | | | | | | | |
| Type Classification - Standard | | | 1Q | | | | | | |

| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) | | | | | | February 2002 | |
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| BUDGET ACTIVITY 4 - Demonstration/validation | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | PROJECT 643 | |
| <u>D. Schedule Profile (continued)</u> | <u>FY 2001</u> | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> |
| Initial Operational Capability | | | 3Q | | | | |
| XM1002 TP-T CARTRIDGE | | | | | | | |
| Propellant Development | 1-2Q | | | | | | |
| Contractor projectile producibility/cost reduction | 1-3Q | | | | | | |
| Cartridge Design Freeze | | 3Q | | | | | |
| Procure PQT propellant/propulsion components | 3-4Q | 1-4Q | 1-4Q | | | | |
| Procure other PQT components/LAP | | 1-4Q | 1-4Q | | | | |
| Test PQT | | | | 1-3Q | | | |
| Type Classify | | | | 4Q | | | |
| XM1028 CANISTER CARTRIDGE | | | | | | | |
| Prototype Manufacturing | | | | 1-4Q | | | |
| Qualification testing | | | | 3Q | | | |
| Milestone C Type Classification | | | | 4Q | | | |
| MRM | | | | | | | |
| Award Study Contracts | | 3Q | | | | | |

| ARMY RDT&E COST ANALYSIS(R-3) | | | | | | | | | February 2002 | | | |
|--|------------------------|--------------------------------|----------------|--------------|---|--------------|--------------------|--------------|--------------------|-----------------------|------------|--------------------------|
| BUDGET ACTIVITY 4 - Demonstration/validation | | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | PROJECT 643 | | |
| I. Product Development | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Alliant Techsystems (M829E3) | C-CPIF | ATK Hopkins, MN | 30800 | 9623 | 1Q | 10700 | 1Q | 0 | | 0 | 51123 | 53135 |
| b . ARDEC (M829E3) | MIPR | Picatinny Arsenal, NJ | 43247 | 2289 | 1Q | 2100 | 1-4Q | 0 | | 0 | 47636 | 0 |
| c . Army Research Lab (M829E3) | MIPR | Aberdeen PG, MD | 17299 | 1696 | 1Q | 400 | 1Q | 0 | | 0 | 19395 | 0 |
| d . Rheinmettal(M829E3) | SS-FFP | Germany | 2100 | 900 | 2Q | 0 | | 0 | | 0 | 3000 | 0 |
| e . Batelle Northwest Lab (M829E3) | MIPR | Richmond, WA | 4110 | 300 | 1Q | 0 | | 0 | | 0 | 4410 | 0 |
| f . Miscellaneous (M829E3) | MIPR | Multiple | 1105 | 1345 | 1-2Q | 100 | 2Q | 0 | | 0 | 2550 | 0 |
| g . MRM (Integration Contract) | C-CPIF | TBD | 0 | 0 | | 1800 | 3Q | 0 | | 0 | 1800 | 0 |
| h . XM1002 TP-T Ctg | FFP | ATK New Brighton, MN | 600 | 2400 | 1Q | 4015 | 2Q | 768 | 1Q | 751 | 8534 | 0 |
| i . ARDEC (XM1002) | MIPR | Picatinny Arsenal, NJ | 370 | 460 | 1Q | 470 | 1-4Q | 300 | 1-4Q | 300 | 1900 | 0 |
| j . Miscellaneous (XM1002) | MIPR | Multiple | 30 | 390 | 1-2Q | 100 | 2Q | 50 | 1Q | 50 | 620 | 0 |
| k . XM1028 Canister Cartridge | FFP | TBD | 0 | 0 | | 0 | | 2400 | 1Q | 0 | 2400 | 0 |
| | | | | | | | | | | | | |

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|---|------------------------------|-----------------------------------|-------------------|-----------------|--|-----------------|--------------------------|-----------------|--------------------------|---------------------|---------------|--------------------------------|
| BUDGET ACTIVITY 4 - Demonstration/validation | | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | PROJECT 643 | | |
| I. Product Development (continued) | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| 1. ARDEC (XM1028) | MIPR | Picatinny Arsenal, NJ | 0 | 0 | | 0 | | 300 | 1-4Q | 0 | 300 | 0 |
| | | | | | | | | | | | | |
| Subtotal: | | | 99661 | 19403 | | 19685 | | 3818 | | 1101 | 143668 | 53135 |
| | | | | | | | | | | | | |
| II. Support Cost | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| | | | 0 | 0 | | 0 | | 0 | | 0 | 0 | 0 |
| Subtotal: | | | | | | | | | | | | |
| Remarks: Not Applicable | | | | | | | | | | | | |
| III. Test and Evaluation | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a. YPG, APG (M829E3) | MIPR | Yuma AZ/APG, MD | 10987 | 4200 | 1-2Q | 7500 | 1-3Q | 0 | | 0 | 22687 | 0 |
| b. Army Research Lab (M829E3) | MIPR | Aberdeen PG, MD | 6315 | 1320 | 1-3Q | 500 | 1-3Q | 0 | | 0 | 8135 | 0 |
| c. Miscellaneous (M829E3) | MIPR | Multiple | 11795 | 278 | 1-3Q | 100 | 1-3Q | 0 | | 0 | 12173 | 0 |
| | | | | | | | | | | | | |

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|--|------------------------------|-----------------------------------|-------------------|-----------------|---|-----------------|--------------------------|-----------------|--------------------------|-----------------------|---------------|--------------------------------|
| BUDGET ACTIVITY 4 - Demonstration/validation | | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | PROJECT 643 | | |
| III. Test and Evaluation (continued) | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| d . Miscellaneous (MRM) | MIPR | Multiple | 0 | 0 | | 150 | 2-4Q | 0 | | 0 | 150 | 0 |
| e . Aberdeen Test Center (XM1002) | MIPR | Aberdeen PG, MD | 0 | 0 | | 375 | 1-3Q | 0 | | 500 | 875 | 0 |
| f . Miscellaneous (XM1002) | MIPR | Multiple | 0 | 100 | 1-4Q | 100 | 1Q | 50 | 1Q | 50 | 300 | 0 |
| g . Aberdeen Test Center (XM1028) | MIPR | Aberdeen PG, MD | 0 | 0 | | 0 | | 1000 | 2Q | 0 | 1000 | 0 |
| | | | | | | | | | | | | |
| Subtotal: | | | 29097 | 5898 | | 8725 | | 1050 | | 550 | 45320 | 0 |
| Remarks: Testing includes all testing needed to support M829E3, MRM, XM1028 and XM1002 Cartridges. | | | | | | | | | | | | |
| IV. Management Services | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . PM-TMAS (M829E3) | MIPR | Picatinny Arsenal, NJ | 8784 | 1300 | 1-4Q | 700 | 1-4Q | 0 | | 0 | 10784 | 0 |
| b . Miscellaneous (M829E3) | MIPR | Multiple | 230 | 140 | 1-4Q | 237 | 1-4Q | 0 | | 0 | 607 | 0 |
| c . PM-TMAS (MRM) | MIPR | Picatinny Arsenal, NJ | 0 | 0 | | 50 | 1-4Q | 0 | | 0 | 50 | 0 |
| d . PM-TMAS (XM1002) | MIPR | Picatinny Arsenal, NJ | 0 | 270 | 1-4Q | 340 | 1-4Q | 200 | 1-4Q | 0 | 810 | 0 |
| | | | | | | | | | | | | |

| ARMY RDT&E COST ANALYSIS(R-3) | | | | | | | | | February 2002 | | | |
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| BUDGET ACTIVITY 4 - Demonstration/validation | | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | PROJECT 643 | | |
| IV. Management Services (continued) | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| e . PM-TMAS (XM1028) | MIPR | Picatinny Arsenal, NJ | 0 | 0 | | 0 | | 300 | 1-4Q | 0 | 300 | 0 |
| | | | | | | | | | | | | |
| Subtotal: | | | 9014 | 1710 | | 1327 | | 500 | | 0 | 12551 | 0 |
| Remarks: Management Services also includes data line/contract costs to support Contractor Integrated Technical Information Services (CITIS) for M829E3. | | | | | | | | | | | | |
| Project Total Cost: | | | 137772 | 27011 | | 29737 | | 5368 | | 1651 | 201539 | 53135 |
| | | | | | | | | | | | | |

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| BUDGET ACTIVITY 4 - Demonstration/validation | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | PROJECT 64B | | | | |
| COST (In Thousands) | | | | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
| 64B 105MM CONVENTIONAL TANK AMMUNITION | | | | 0 | 22337 | 2993 | 3978 | 0 | 0 | 0 | 0 | 29308 |
| <p><u>A. Mission Description and Budget Item Justification:</u> This project will develop 105mm ammunition for the Mobile Gun System (MGS) in the new Interim Brigade Combat Teams (IBCTs). Mid Range Munition (MRM) will provide both the MGS and Future Combat System Block 1 systems (FUE FY08) the ability to hit and kill all battlefield targets at extended ranges, both line of sight and beyond line of sight, increase survivability and lethality, and expand the Maneuver Task Force Commander's battle space. Global Positioning System (GPS) Anti-Jam device for munitions and platforms will allow U.S. forces to fight in environments where low cost GPS jammers exist. Development of the XM1040, 105mm anti-personnel canister cartridge responds to an urgent need of the MGS to immediately suppress dismounted infantry assaults in close/restricted terrain. This two-year development effort will leverage the technology of the preceding XM1028 120mm anti-personnel canister cartridge program. Like the XM1028, the XM1040 canister cartridge is envisioned to be similar in concept to a shotgun shell, expelling hundreds of metal balls upon muzzle exit. Unlike previous anti-personnel tank cartridges, the XM1040 will have no fuze and is intended to be a simple, low-cost, low-technology cartridge.</p> <p>This project develops the necessary changes to platform weapons and fire control systems brought about by ever more capable ammunition. Additionally, this project will leverage ongoing and projected International Cooperative developments such as Future Tank Main Armament (FTMA) and many other program arrangements and agreements.</p> <p>This project supports the Legacy-to-Objective transformation path of the Transformation Campaign Plan.</p> <p><u>FY 2002 Planned Program</u></p> <ul style="list-style-type: none"> • 5600 Kinetic Energy (KE) System Engineering and System Design (MRM) • 5400 KE Seeker Development and Algorithm Improvement (MRM) • 2000 KE End- to- End Air Frame Fabrication and Test (MRM) • 1437 KE Lethality and Propulsion Fabrication and Test (MRM) • 3100 Tri-mode (TM3) System Engineering and System Design (MRM) • 1900 TM3 Seeker Development and Algorithm Improvement (MRM) | | | | | | | | | | | | |

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| BUDGET ACTIVITY 4 - Demonstration/validation | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | PROJECT 64B |
| <p><u>FY 2002 Planned Program (Continued)</u></p> <ul style="list-style-type: none"> 1900 TM3 Lethality and End to End Fabrication and Test (MRM) 1000 Anti-Jam GPS Preliminary Design and Analysis (MRM) <p>Total 22337</p> <p><u>FY 2003 Planned Program</u></p> <ul style="list-style-type: none"> 2993 Contract Award/Prototype Manufacturing (XM1040) <p>Total 2993</p> | | |

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| BUDGET ACTIVITY 4 - Demonstration/validation | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | PROJECT 64B | |
| | | | | | | | | | |
| <u>B. Other Program Funding Summary</u> | <u>FY 2001</u> | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | <u>To Compl</u> | <u>Total Cost</u> |
| PAA SSN E24300: CTG, 105mm HEP-T, w/Fuze M393A3 | 0 | 5994 | 8100 | 8000 | 8000 | 0 | 0 | 0 | 30094 |
| PAA SSN E22300: CTG, 105mm TP-T, M467A1 | 0 | 0 | 6000 | 10000 | 15000 | 21000 | 21000 | Continuing | Continuing |
| PAA SSN E24400 CTG, 105mm Canister, M1040 | 0 | 0 | 0 | 3000 | 5000 | 2000 | 0 | 0 | 10000 |
| <p><u>C. Acquisition Strategy:</u> FY2003 will initiate the development of the XM1040, 105mm anti-personnel Canister cartridge required for the Mobile Gun System (MGS) in the new Interim Brigade Combat Teams (IBCTs) with follow-on production upon completion. The contract award will be competitive and developed using performance specifications leveraging the technology of the preceding XM1028, 120mm anti-personnel Canister cartridge. This project will use a streamlined acquisition strategy, keeping costs low while meeting scheduled requirements. Integrated Product Teams (IPTs) will be used. The Operational Requirements Document (ORD) for this program has been approved.</p> | | | | | | | | | |
| <u>D. Schedule Profile</u> | <u>FY 2001</u> | <u>FY 2002</u> | <u>FY 2003</u> | <u>FY 2004</u> | <u>FY 2005</u> | <u>FY 2006</u> | <u>FY 2007</u> | | |
| Preliminary Design Reviews (KE/TM3) (MRM) | | 3Q | | | | | | | |
| Lethality Tests (KE/TM3) (MRM) | | 4Q | | | | | | | |
| End to End Airframe and Propulsion Tests (KE/TM3) (MRM) | | 4Q | | | | | | | |
| Seeker and Algorithm Tests (MRM) | | 3-4Q | | | | | | | |
| Preliminary Design Review (GPS) | | 3Q | | | | | | | |
| Critical Design Review (GPS) | | | 1Q | | | | | | |
| Contract Award (XM1040) | | | 2Q | | | | | | |
| Engineering Design Tests (XM1040) | | | 3-4Q | | | | | | |
| Prototype Manufacturing (XM1040) | | | | 1-4Q | | | | | |
| Qualification Testing (XM1040) | | | | 3Q | | | | | |
| Milestone C Type Classification (XM1040) | | | | 4Q | | | | | |

| ARMY RDT&E COST ANALYSIS(R-3) | | | | | | | | | February 2002 | | | |
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| BUDGET ACTIVITY 4 - Demonstration/validation | | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | PROJECT 64B | | |
| I. Product Development | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Alliant Tech Systems | SS-CPFF | Clearwater, FL | 0 | 0 | | 9100 | 2Q | 0 | | 0 | 9100 | 0 |
| b . Raytheon | SS-CPFF | Tucson, AZ | 0 | 0 | | 3800 | 2Q | 0 | | 0 | 3800 | 0 |
| c . Electro-Radiation Inc. | SS-CPFF | Totowa, NJ | 0 | 0 | | 700 | 2Q | 0 | | 0 | 700 | 0 |
| d . ARDEC | MIPR | Picatinny, NJ | 0 | 0 | | 2637 | 2-4Q | 0 | | 0 | 2637 | 0 |
| e . Integration Contractor | C-CPFF | TBD | 0 | 0 | | 1800 | 2Q | 0 | | 0 | 1800 | 0 |
| f . XM1040 | C-CP | TBD | 0 | 0 | | 0 | | 2000 | 2Q | 2700 | 4700 | 0 |
| g . ARDEC (XM1040) | MIPR | Picatinny, NJ | 0 | 0 | | 0 | | 343 | 1-4Q | 350 | 693 | 0 |
| | | | | | | | | | | | | |
| Subtotal: | | | 0 | 0 | | 18037 | | 2343 | | 3050 | 23430 | 0 |
| | | | | | | | | | | | | |

| ARMY RDT&E COST ANALYSIS(R-3) | | | | | | | | | February 2002 | | | |
|--|------------------------|--------------------------------|----------------|--------------|---|--------------|--------------------|--------------|--------------------|-----------------------|------------|--------------------------|
| BUDGET ACTIVITY 4 - Demonstration/validation | | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | PROJECT 64B | | |
| II. Support Cost | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| | | | 0 | 0 | | 0 | | 0 | | 0 | 0 | 0 |
| Subtotal: | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| III. Test and Evaluation | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Yuma Proving Ground (YPG) | MIPR | Yuma, AZ | 0 | 0 | | 200 | 2-4Q | 0 | | 0 | 200 | 0 |
| b . Aberdeen Test Center (ATC) | MIPR | Aberdeen, MD | 0 | 0 | | 200 | 2-4Q | 0 | | 0 | 200 | 0 |
| c . Army Research Lab (ARL) | MIPR | Aberdeen, MD | 0 | 0 | | 1250 | 2-4Q | 0 | | 0 | 1250 | 0 |
| d . AMCOM | MIPR | Huntsville, AL | 0 | 0 | | 600 | 2-4Q | 0 | | 0 | 600 | 0 |
| e . Various PM/Schools | MIPR | TBD | 0 | 0 | | 800 | 2-4Q | 0 | | 0 | 800 | 0 |
| f . STRICOM | MIPR | Orlando, FL | 0 | 0 | | 500 | 2-4Q | 0 | | 0 | 500 | 0 |
| g . Yuma Proving Ground (YPG) (XM1040) | MIPR | Yuma, AZ | 0 | 0 | | 0 | | 250 | 3-4Q | 578 | 828 | 0 |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |

| ARMY RDT&E COST ANALYSIS(R-3) | | | | | | | | | February 2002 | | | |
|--|------------------------------|-----------------------------------|-------------------|-----------------|---|-----------------|--------------------------|-----------------|--------------------------|-----------------------|---------------|--------------------------------|
| BUDGET ACTIVITY 4 - Demonstration/validation | | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | PROJECT 64B | | |
| III. Test and Evaluation (continued) | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| Subtotal: | | | 0 | 0 | | 3550 | | 250 | | 578 | 4378 | 0 |
| | | | | | | | | | | | | |
| IV. Management Services | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . PM-TMAS (MRM) | In House | Picatinny Arsenal, NJ | 0 | 0 | | 750 | 2-4Q | 0 | | 0 | 750 | 0 |
| b . PM-TMAS (XM1040) | In House | Picatinny Arsenal, NJ | 0 | 0 | | 0 | | 400 | 1-4Q | 350 | 750 | 0 |
| | | | | | | | | | | | | |
| Subtotal: | | | 0 | 0 | | 750 | | 400 | | 350 | 1500 | 0 |
| | | | | | | | | | | | | |
| Project Total Cost: | | | 0 | 0 | | 22337 | | 2993 | | 3978 | 29308 | 0 |
| | | | | | | | | | | | | |

| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) | | | | | | | February 2002 | | |
|---|-------------------|---------------------|---------------------|---|---------------------|---------------------|----------------------|-----------------------|------------|
| BUDGET ACTIVITY 4 - Demonstration/validation | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | PROJECT 694 | |
| COST (In Thousands) | FY 2001 Actual | FY 2002 Estimate | FY 2003 Estimate | FY 2004 Estimate | FY 2005 Estimate | FY 2006 Estimate | FY 2007 Estimate | Cost to Complete | Total Cost |
| 694 MEDIUM CALIBER AMMUNITION | 0 | 0 | 2993 | 1989 | 0 | 0 | 0 | 0 | 4982 |
| <p><u>A. Mission Description and Budget Item Justification:</u> This project will develop Medium Caliber Ammunition for the Bradley Fighting Vehicle System (BFVS), as well as other systems using Medium Caliber Armaments. FY 2003 funds the development of the 25mm M910E1 Target Practice, Discarding Sabot w/Tracer (TPDS-T) cartridge. This project will provide a leverage opportunity and increase insight to resolve the existing issue of ineffective BFVS training since the 25mm M910 TPDS-T cartridge was type classified as the trainer for the M791 Armor Piercing, Discarding Sabot w/Tracer (APDS-T) tactical cartridge. The 25mm M910E1 will provide full range ballistic similitude to the current tactical round, the 25mm M919 Armor Piercing, Fin Stabilized, Discarding Sabot w/Tracer (APFSDS-T), as well as its predecessor, the M791 cartridge.</p> <p>This project develops the necessary changes to platform weapons and fire control systems brought about by ever more capable ammunition. Additionally, this project will leverage ongoing and projected International Cooperative developments such as Future Tank Main Armament (FTMA) and many other program arrangements and agreements.</p> <p>This project supports the Legacy-to-Objective transition path of the Transformation Campaign Plan (TCP).</p> <p><u>FY 2003 Planned Program</u></p> <ul style="list-style-type: none"> • 2993 Contract Award/Prototype Manufacturing <p>Total 2993</p> | | | | | | | | | |

| | | | | | | | | | |
|--|--|--|--|---|--|--|---------------|-----------------------|--|
| ARMY RDT&E BUDGET ITEM JUSTIFICATION (R-2A Exhibit) | | | | | | | February 2002 | | |
| BUDGET ACTIVITY 4 - Demonstration/validation | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | PROJECT 694 | |

| B. Other Program Funding Summary | FY 2001 | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 | To Compl | Total Cost |
|---|---------|---------|---------|---------|---------|---------|---------|----------|------------|
| PAA SSN E08210 , M919 25mm KE (Bradley) | 36736 | 29792 | 0 | 0 | 0 | 26000 | 79000 | 0 | 171528 |
| PAA SSN E08204, M910 25mm TPDS-T | 16868 | 23980 | 16951 | 0 | 0 | 8821 | 8655 | 0 | 75275 |
| PAA SSN E08203 M793 25mm TP-T | 12241 | 15971 | 16136 | 443 | 0 | 6145 | 12293 | 0 | 63229 |

C. Acquisition Strategy: An acquisition strategy will be prepared in FY2002 for formal staffing. FY2003 will initiate the two year development of the 25mm M910E1 Target Practice, Discarding Sabot w/Tracer (TPDS-T) for the Bradley Fighting Vehicle System (BFVS) with follow-on production upon completion. The contract award will be competitive and developed using performance specifications. This project will use a streamlined acquisition strategy, keeping costs low while meeting schedule requirements. Integrated Product Teams (IPTs) will be used. The Operational Requirements Document (ORD) for this program has been approved.

| D. Schedule Profile | FY 2001 | FY 2002 | FY 2003 | FY 2004 | FY 2005 | FY 2006 | FY 2007 |
|--------------------------|---------|---------|---------|---------|---------|---------|---------|
| 25MM M910E1 | | | | | | | |
| Contract Award | | | 2Q | | | | |
| Engineering Design Tests | | | 1-3Q | | | | |
| Prototype Manufacturing | | | 3-4Q | | | | |
| Qualification Testing | | | | 1-3Q | | | |
| Type Classification | | | | 4Q | | | |

| ARMY RDT&E COST ANALYSIS(R-3) | | | | | | | | | February 2002 | | | |
|---|-------------------------|--------------------------------|----------------|--------------|--|--------------|--------------------|--------------|--------------------|------------------|------------|--------------------------|
| BUDGET ACTIVITY 4 - Demonstration/validation | | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | PROJECT 694 | | |
| I. Product Development | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . TBD (M910E1) | C-CP | TBD | 0 | 0 | | 0 | | 2350 | 2Q | 989 | 3339 | 0 |
| b . ARDEC (M910E1) | Picatinny Arsenal, N.J. | | 0 | 0 | | 0 | | 450 | 1-4Q | 450 | 900 | 0 |
| | | | | | | | | | | | | |
| Subtotal: | | | 0 | 0 | | 0 | | 2800 | | 1439 | 4239 | 0 |
| | | | | | | | | | | | | |
| II. Support Cost | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| | | | | | | | | | | | | |
| Subtotal: | | | 0 | 0 | | 0 | | 0 | | 0 | 0 | 0 |
| | | | | | | | | | | | | |

| ARMY RDT&E COST ANALYSIS(R-3) | | | | | | | | | February 2002 | | | |
|--|------------------------|--------------------------------|----------------|--------------|---|--------------|--------------------|--------------|--------------------|-----------------------|------------|--------------------------|
| BUDGET ACTIVITY 4 - Demonstration/validation | | | | | PE NUMBER AND TITLE 0603639A - Tank and Medium Caliber Ammunition | | | | | PROJECT 694 | | |
| III. Test and Evaluation | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . Yuma Proving Grounds (M910E1) | Yuma A.Z. | | 0 | 0 | | 0 | | 0 | | 350 | 350 | 0 |
| | | | | | | | | | | | | |
| Subtotal: | | | 0 | 0 | | 0 | | 0 | | 350 | 350 | 0 |
| | | | | | | | | | | | | |
| IV. Management Services | Contract Method & Type | Performing Activity & Location | Total PYs Cost | FY 2001 Cost | FY 2001 Award Date | FY 2002 Cost | FY 2002 Award Date | FY 2003 Cost | FY 2003 Award Date | Cost To Complete | Total Cost | Target Value of Contract |
| a . PM-TMAS (M910E1) | In House | Picatinny Arsenal, NJ | 0 | 0 | | 0 | | 193 | 1-4Q | 200 | 393 | 0 |
| | | | | | | | | | | | | |
| Subtotal: | | | 0 | 0 | | 0 | | 193 | | 200 | 393 | 0 |
| | | | | | | | | | | | | |
| Project Total Cost: | | | 0 | 0 | | 0 | | 2993 | | 1989 | 4982 | 0 |
| | | | | | | | | | | | | |